

BULLETIN

of the

MAHONING COUNTY MEDICAL SOCIETY

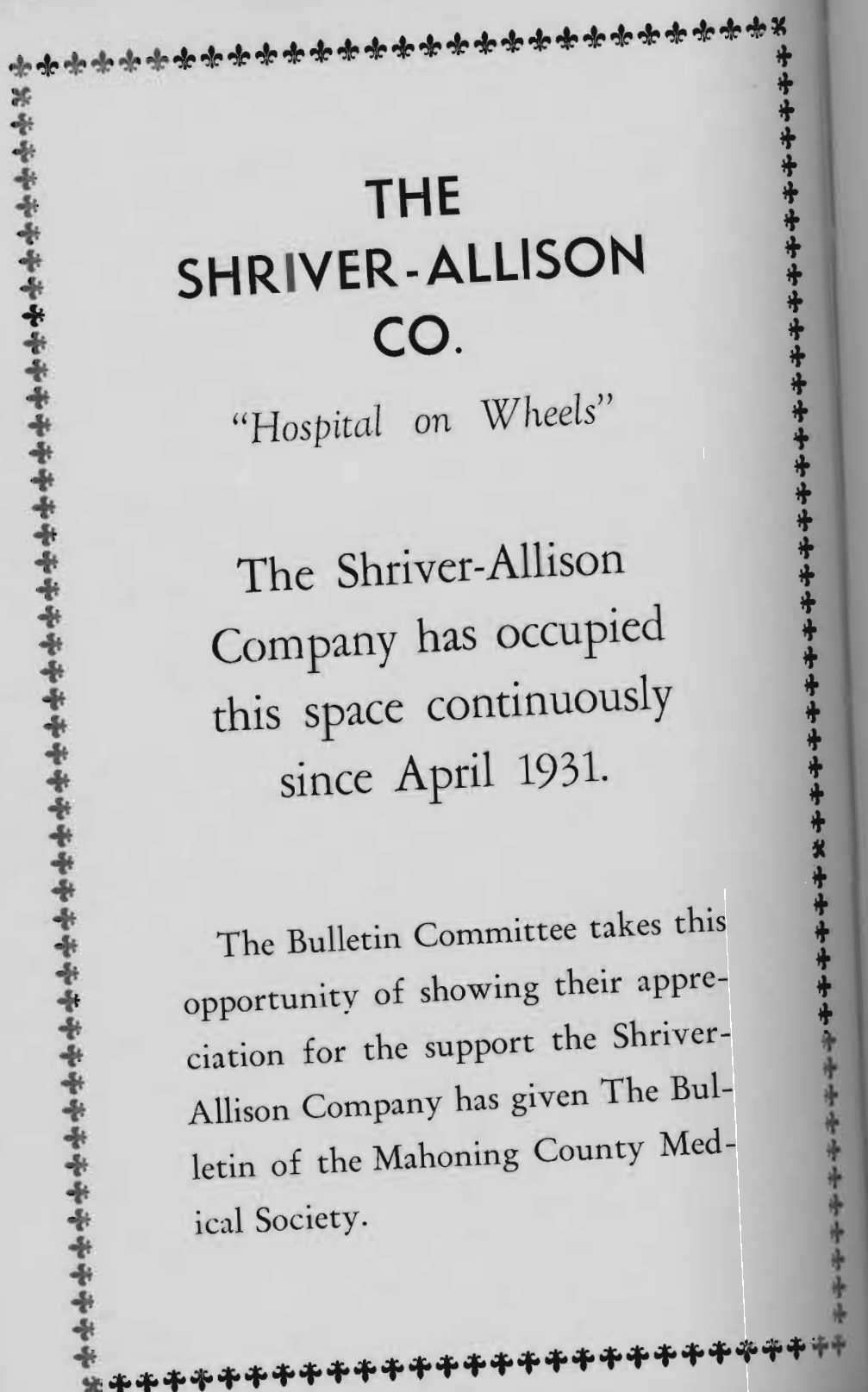
SEPTEMBER, 1933

Volume Three

Number Nine

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—Oliver Wendell Holmes.





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Mothers will cooperate with physicians better in the feeding of their babies because Pablum is so easy to prepare. It gives them the extra-hour's rest in the morning and saves bending their backs over a hot kitchen stove in summer. Please send for samples to Mead Johnson & Company, Evansville, Indiana.—Adv.

Preventing NUTRITIONAL ANEMIA in Infants through a Normal DIETARY REGIMEN

NUTRITIONAL anemia was present in 45% of the breast-fed and 51% of the bottle-fed in a group of more than 1,000 infants studied by Mackay.¹ Although this anemia was of mild degree, *it was sufficient approximately to double the morbidity among the artificially fed.*

Anemia Prevalent

Commenting on this work, the British Advisory Committee on Nutrition writes, "This form of anaemia is prevalent among infants, especially those living under conditions of city life, and is attributed to a deficiency of available iron and possibly also of copper. Its most important feature is susceptibility to infection, particularly a liability to colds, otorrhoea, bronchitis, and enteritis, and a tendency for infections to become chronic."²

Iron, incorporated in powdered milk, should be given as a routine to bottle-fed infants, according to the recommendations of this committee in a report to the Ministry of Health.

Milk Deficient in Iron

Stored in the liver of the full-term infant is a supply of iron and copper theoretically sufficient for the first six months of life. But actually the reserve is subject to wide variation,¹ probably because of variations in the iron content of the mother's diet during pregnancy. Hill, for example, says, "If the mother is anemic herself, or if she has eaten little iron-containing food during the last months of pregnancy, her offspring is born with an insufficient iron deposit. . . ."³

The trend is also toward the introduction of iron-rich solid foods at an early age. The iron content of many foods is variable, however. Leichsenring and Flor⁴ found that children's diets planned to contain 5 and 8.5 mg. iron actually contained only 3.25 and 6.5 mg., respectively. Pabulum, higher than most foods in iron and con-

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taining standardized amounts of this mineral can be administered as early as the third month. Clinical studies by Summerfeldt⁵ show that Mead's Cereal (of which Pabulum is the pre-cooked form) is capable of increasing the hemoglobin percentage of growing children.

* The desirable iron intake for children, according to Rose *et al.*, is 0.76 mg. per 100 calories. Infant of 1 month (8¼ lb.) and infant of 3 months (11¼ lb.), both require 50 calories per lb.⁶

¹⁻⁶ Bibliography on request.

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THE PRESIDENT'S PAGE

With the opening of the school season in this immediate neighborhood, with many thousands of children coming together, many of them in close contact during the next nine months in the school rooms, there comes the open season for the acute infections.

The opportunities of the profession for preventive medicine in the eradication of many of these diseases are equally great.

Physicians should be aware of the needs, and explain the situation to patients in forceful reasonable terms which will be convincing. At this time of year this should be a means of bringing the parents to the offices seeking passive immunity for their families.

A few months ago the Society had printed small cards which could be enclosed with statements each month. These called attention to vaccination against Smallpox, Diphtheria, and Typhoid. Others stressed the importance of periodic health examinations. How many of these have been obtained from the secretary's office and used?

These are preventive measures, approved by the County Society, not commercial but ethical, and in line with health protection.

Some day Poliomyelitis, Influenza, and Encephalitis may be added to the list of preventable diseases, but for the present let us emphasize and utilize that which we have now.

J Paul Harvey



BIOGRAPHIES OF THE LIVING

H. E. PATRICK, M. D.

Dr. Harry E. Welch is the subject of the first of these sketches. Also the collaborator, as it has been the writer's privilege to visit Dr. Welch during his convalescence and have him recall the incidents herein recorded.

The publishing date of this issue is Sept. 10th. By happy coincident, Sept. 10th marks the seventy-second birthday of Dr. Welch. The original event occurred on Sept. 10, 1861, in the village of Youngstown, he being the only child of Anthony Welch and Amanda Huebeler Welch. At that time the Welch family occupied a house situated near the Mahoning River, which site, today, is obstructed from the view of the thousands who cross it, by the Market Street viaduct. Dr. Welch says of himself: "I was born,

not by the light of day, but by the light of the Falcon furnace". The population of Youngstown at that time was about 4,000. Practically all of the city lay south of the present Federal Street; Boardman and Front Streets were the main resident streets of the village, and the easterly and westerly limits were Basin Street and Spring Common.

Dr. Welch attended the old Front Street School located just west of the postoffice building. This structure was demolished but a few years ago, giving way to the demands of the automobile for more parking space. Later he attended Rayen High School, but recently finished, and opened for the enrollment of students, and is one of the oldest living graduates of the institution. During

his years of schooling, during vacation time and even during school time, he worked about the mill. Dr. Welch's father, a huge man, six feet two inches tall and weighing two hundred and sixty pounds, was superintendent and was responsible for full crews to man the rolls. When,

after a particularly strenuous celebration of pay-day or some holiday, the mill was short of hands, Dr. Welch would be pressed into service. Graduation from Rayen High School was in 1882.

In Oct. 1882, Dr. Welch in company with the future Drs. W. H. Buechner and Sparrow, the latter of Poland, matriculated in the Medical Department of Western Reserve University. This institution of learning was but recently opened, being a composite of the Western Reserve College at



Harry E. Welch, M. D., F. A. C. S.

Hudson, Ohio, and the Medical School at Willoughby. The course of study prescribed was of three years duration, the semesters extending from September to February. Following the close of regular work in February, there would be offered optional course of six to eight weeks duration under some member of the faculty. The courses of study in those days did not follow a preconceived plan but were mainly repetitions with additions, from year to year, as the scope and vision of the teacher widened, and newer ideas and methods were adapted. Dr. Welch, during his three years residence in Cleveland, had as roommates, Dr. Buechner, and Dr. Sparrow from Youngstown, and Dr. Carroll from Monroeville. His first year, he lived at 105 E. 9th St.,

September, 1933 ✿

and the other two years on Lake Ave., just west of Erie Street. (Mrs. Welch, at this point, made pertinent inquiry as to whether all board and room bills had been paid.)

The faculty of that time, as recalled by Dr. Welch, included Dr. Proctor Thayer and Dr. G. C. E. Weber in surgery, Dr. John Darby in Medicine, Dr. Hunter Powell in obstetrics, Dr. D. B. Smith in disease of the eye and ear, Dr. C. B. Parker in physiology. Dr. Welch pays glowing tribute to the capabilities of Dr. Weber and says had he lived at this time, with the advances and technique of our times, there would be no more outstanding diagnostician nor skilful surgeon than Dr. Weber.

Toward the close of Dr. Welch's attendance at Reserve, Dr. Dudley Peter Allen was added to the staff. Dr. Allen had been trained abroad and brought new ideas and methods which contributed greatly to the practice of surgery in Cleveland. Lectures were given in the amphitheater of the old Marine Hospital and the Old Charity Hospital. Lakeside Hospital was not then in existence. To this day, Dr. Welch bears testimony to the high calibre of the faculty of that time. Sixty-five men graduated in the class of 1885. Three from Youngstown, Drs. Welch, Buechner and Sparrow, decided to pursue the fourth year of study just provided by the University of Pennsylvania. These three, and a fourth from Philadelphia, constituted the first fourth-year class to study at that school. This course of study was pursued during the winter of 1885-86. Fortunate indeed were they, for this was the period when Osler was teaching at Pennsylvania going shortly afterwards to Johns Hopkins.

Then abroad. October 1886, found Dr. Welch and Dr. Buechner in Vienna. Albert held the chair of medicine. Billroth that of surgery, Pavik taught obstetrics and Rokitansky, pathology. While lectures of each of those mentioned were attended, Dr. Welch spent most of his time under Rokitansky. "specializing" in microscopy and pathology. As many as 20 autopsies were attended in a morning. On one occasion, 3 cases of cholera came to autopsy in one morning. The work

in Vienna extended until May 1887. May and June were spent at Berlin. Again much attention was given to pathology, and of course Virchow was the principal attraction. July and August were spent in London. Here no particular attempt was made to pursue an organized course of study, but various clinics and hospitals were visited. As Dr. Welch expressed it "we just browsed around".

In Oct. 1887 Dr. Welch opened his office for the practice of medicine a short distance from the place of his birth, at the southeast corner of the square, over Jewell's drug store. Suitable office space was difficult to obtain at that time. The following were some of the men then in practice: Dr. W. L. Buechner, Dr. Geo. S. Peck, Dr. A. M. Clark, Dr. Floor. Dr. Cunningham, the two Drs. Woodbridge, and Dr. McCurdy.

Four years after beginning practice, Dr. Welch was elected coroner. That was in 1892 and marked the beginning of a continuous service in public office that has no equal in the community. For, the following year he was appointed health officer, the second to be appointed in Youngstown and held this office continuously until Jan. 1, 1932. Then was brought to a close a continuous service of 39 years to the community, a service which raised Youngstown from a pestilence-ridden, fever-stricken community to one which frequently carries off the national laurels in matters of good public health. During many of these years, Dr. Welch was ably assisted by Mr. George Steventon, who came to the Board of Health as chemist and bacteriologist. Dr. Welch, modestly prevailing, credits Mr. Steventon as being worth more to this community than any other individual. We concur in admitting his value but feel that his chief, the health officer, too, shares in the glory of his own expression. In June 1899, he married Adelaide Winsper.

The Youngstown Hospital has benefited greatly through the services of Dr. Welch. He early became associated on the staff with the men then in practice. In the early days of the Hospital, each group handled all phases of work when on duty. Later the staff was sub-divided and



Dr. Welch for years conducted one of the medical services. Later when Dr. J. J. Thomas resigned as chief of obstetrics, Dr. Welch conducted that Department for a number of years. For the past decade, he has been the honored and respected medical member of the Board of Trustees of the Youngstown Hospital. In addition to his hospital connection, in association with Dr. Buechner, he handled the Erie Railroad work for forty years.

Dr. Welch has always been a firm, staunch supporter of organized medicine. His medical affiliations have been with the county and state and national organizations and the American Public Health Ass'n. No one in the years of his activity ever attended local, state or national meetings

more assiduously, endeavoring by every means to keep in the van of medical thought. Nor was any new or worthwhile idea ever advocated before the local society, that did not have his support.

It has been the privilege of many of us to "listen in" at the Sunday morning staff room gatherings, which Dr. Welch so frequently attended, and over which, by tacit agreement, he seemed to preside. For many of the men, these meetings were looked forward to with avidity and constituted their Sunday worship. One was impressed with the part played by the ideals and ethics of medicine in the opinions expressed by Dr. Welch. Had he no other religious tenets, these were even enough.



SECRETARY'S REPORT

The following doctors of our County have been notified by this office that they are now members of the Mahoning County Medical Society, which makes them members of the Ohio State Medical Association and the American Medical Association:

Dr. Raymond A. Hall
Dr. Dana Welsey Cox
Dr. John Francis Dulick
Dr. Andrew Miglets
Dr. Stephen W. Boesel (Associate Member)
Dr. Lawrence Scarnecchia.

The activities of the Society have been progressing without a hitch, so that September starts out with a full program. The State meeting has been held, and thanks to our Akron brothers, it was very successful.

The Secretary would like to inquire of the Councilors why they have not been attending the regular called meetings. The Constitution states that there shall be a meeting of this body as often as necessary to conduct the business of the Society and shall be held at least once a month throughout the year. This office realizes that it is rather difficult at times to attend these

meetings but the business of the Society goes on whether it is vacation time or not. Now that the non-meeting time of the year is past, will the Councilors please make an effort to attend the meetings of that body?

The matter of paying the expenses of our State Delegates to the State meetings has been called to our attention and discussed for many months. We would welcome any comment on this matter. Kindly communicate with this office.

At the last Council meeting August 23rd, 1933, your Council decided to underwrite a course of lectures on Hematology. The arrangements have been made by the Program Committee, and the course will start in October. If you have not returned your card for this course, please do so. The course consisting of eight lectures has been well subscribed to, but we need each and every member to get back of it so it will be a success. The men that are giving the course are well qualified and we feel that we will all be benefitted in an educational manner by the newer conditions we will have brought to us by Drs. Doan and Wiseman.

IN THIS ISSUE

Dr. F. F. Monroe, who has seen ten years of service in Panama, and is reticent about telling it, begins a very interesting series on Panama and tropical medicine.

We have a notion that Dr. H. E. Patrick, under his gruff manner, is quite romantic and sentimental. He has written, lovingly, a sketch of the life of Dr. H. E. Welch, who is celebrating his 72nd birthday. We wish Dr. Welch many happy returns of the day.

It might be mentioned here that we have received with pleasure the rumored news that Dr. Patrick will soon announce his candidacy for the

Board of Education. While it has been the policy of the Society to steer clear of politics, in this instance, knowing Dr. Patrick's high code of ethics, his straight thinking and intellectual integrity, as we, his professional confreres do, we cannot refrain from recommending him for this office.

Dr. Patrick is well qualified for this work and will be a valuable asset to the Board of Education. "Pat" deserves the support of every doctor. Let us make it our business to urge our friends to vote for him.

Dr. E. R. Thomas has a timely paper on Acute Anterior Poliomyelitis.



FAITH

By Hugh O. Isbell

Religion is of faith indeed
In God and life and Jesus Christ
I wrote my name unto the creed,
And still my need went unsufficed.

But when I turned aside from prayer
To make another's need my own,
Lo! Christ and God were standing there,
And Faith stood up in flesh and bone.

The Christian Century, Chicago.



A TRUE SAINT

The Indian Mystic Kabir

"He is the true Saint . . .
Who requireth thee not to close the doors,
To hold the breath and renounce the world;
Who maketh thee perceive the Supreme Spirit
Wherever the mind resteth;
Who teacheth thee to be still amidst
all thine activities . . ."

Asia, March, 1933.

ACUTE ANTERIOR POLIO-MYELITIS

It was suggested, because of the seasonal incidence of this disease, that a brief review of the history, symptoms (especially those of the pre-paralytic stage) and treatment should be of general interest at this time.

To begin with, the name "infantile paralysis" is a misnomer and should be discarded as misleading and not descriptive of the disease, inasmuch as adults contract it, and also because paralysis is not at all constant.

Anterior Polio-Myelitis is an acute generalized infection, which, records show, is increasing in prevalence in all parts of the world, but more so in those countries having the most marked seasonal variations in temperature.

An analysis by the U. S. Public Health Service shows that throughout the greater part of the country, about one paralytic case per hundred thousand of population may be expected between December first and June first of each year, and in the other six months about four to fourteen cases. The maximum of paralysis is present at the height of the epidemic season, which is usually in mid-September. The figures for Ohio also show that the disease is present in all the months of the year, with most cases being reported in the late summer, reaching the peak in mid-September.

Although Acute Anterior Polio-Myelitis was first established as a clinical entity in 1840, the earliest records of the disease, in epidemic form, came from Sweden in 1881, Italy and Norway in 1882, Germany and France, 1886. In 1894 an epidemic of 132 cases occurred in Rutland, Vermont. During the years 1907-1910, large epidemics occurred in New York and Massachusetts, following which a rapid increase in the number of cases, reported annually, took place, reaching the climax in 1916, when 29,000 cases and 6,000 deaths were reported in the United States.

This tremendous increase in the incidence of the disease stimulated untiring investigations as to the source of the infection and the mode of transmission. It was shown in

these studies that the relationship between cases of polio-myelitis differs in no way from that in other communicable diseases. The carrier, the unrecognized, the mild and abortive cases are the real menace in any outbreak. J. P. Leake, Surgeon, U. S. Public Health Service, states: "I see no reason for retracting the opinion that the disease is spread largely by healthy carriers, acute carriers rather than chronic, and by human contact rather than by food-and-water supply".

Dr. Frank Oldt, who, in 1927, made a very thorough study of the outbreak in Ohio reached the same conclusion. The attack rate of secondary cases, among exposed members of families, when abortive and suspected cases are included, shows an attack rate comparable with measles and diphtheria. As an instance, he reported the following: five paralyzed cases and one abortive case were reported in a village of 900 inhabitants. He personally investigated every human in the village and examined or questioned each individual. He found in 90 families with 280 individuals over 16 years of age and 253 children, that 223 had in some way been affected during the epidemic. One case had been fatal, 12 paralytic, 38 were considered abortive, 45 remained with abnormal reflexes, but gave no history of having been ill, and 127 had had some illness at the time of the epidemic, such as mild digestive disturbance, transient fever, headache, and usually sore throat. These were classed as suspected cases. In 250 families with no history of attack, there were 305 adults and only 33 children under 16 years of age.

All investigators have clearly shown that acutely appearing paralysis was not the chief consideration and did not represent the whole expression of the disease. In fact, extended epidemiological and clinical studies have convinced us that cases with paralysis form but a small percentage of the total incidence. The circumstance that 70 or 80 per cent, or possibly even a higher count, during epidemics, present merely the aspect of an acute generalized in-

fection without a sign of nervous system injury, is certainly very suggestive.

As clinicians, we are more acutely interested in the so called "pre-paralytic" or "abortive" types, which, if recognized and confirmed, make possible the isolation of the patients in probably the most infectious stage. The onset is usually fairly sudden, and is frequently ushered in by gastro-intestinal symptoms, especially vomiting. Headache is commonly the only complaint of discomfort, although a large percentage will locate the pain in the neck. Fever is generally present, but not especially high, ranging mostly from 100 to 103 degrees. Restlessness is quite evident in at least three-fourths of the cases, with sudden turning, tossing, some ataxic movements and frequently twitching or fibrillary contractions of small muscle groups. Sore throat, coryza, photophobia, constipation, sweating and chills are found in about the same proportion, occurring in 30-40% of the cases.

Inspection will almost invariably disclose findings that are characteristic to this early stage of polio-myelitis. The patient has a disturbed appearance and a rather anxious expression. He is restless, usually flushed, and the head is quite fixed, occasionally with some slight retraction.

Physical examination reveals rigidity of the neck, positive Kernig to some degree, hyper-sensitiveness, especially to plantar stroking, and generally hyperactive reflexes, most marked in the patellar. Tenderness may be elicited over nerve trunks and the erector spinae muscles. Evidences of some upper respiratory infection, with some injection of the throat, including the soft palate, some thin nasal discharge, and injection of the bulbar conjunctivae, are almost always observed.

With these findings, the diagnosis can be quite easily proven by means of a lumbar puncture, which, if performed with a small calibre needle and with novocaine anaesthesia, can be done with no discomfort to the patient. The fluid is clear, may or may not show increased pressure, but by

cytologic examination contains an increased cell-count, ranging from 10 to 700, with an average between 50 and 200 cells. The polymorphonuclear cells predominate early, but gradually decrease until the mononuclears may make up the total count. Globulin is present in variable amounts and a sugar volume normal or increased. With the combined subjective and objective signs and symptoms, plus the spinal fluid findings, it is quite evident that a differential diagnosis from other diseases giving a clear spinal fluid is not difficult.

The treatment of polio-myelitis is especially interesting, because of the divergent opinions of those who have had the opportunity to study control groups in fairly large series. Great enthusiasm was developed for the use of convalescent serum, adult serum, and serum obtained from individual polio-myelitis refractory animals, especially the horse, injected intra-muscularly, intravenously and intra-spinally, before any evidences of paralysis exist. The majority of opinion seems to find some small value in decreasing the mortality, but questionably none in decreasing the morbidity. The horse serum, obtained by inoculating horses with the virus of polio-myelitis, having about five times the neutralizing power of human convalescent serum, gave no more results, clinically, than did the latter. Nevertheless, the optimistic opinions of those who have not observed untreated patients for comparison cannot be entirely disregarded.

Frequent spinal drainage has also been advised by many careful and reliable investigators, as a means of decreasing the concentration of the spinal fluid, relieving pressure if present, dilution of toxic products, and dehydration of oedematous nervous tissue. This procedure has many supporters and certainly seems to have some practical justification. Intravenous administration of hypertonic solutions, with a view of spinal dehydration, does not seem to present any real scientific virtue. X-Ray exposure of the cervical, thoracic and lumbar portions of the spine was first used in France by Bordier, in 1910, and is at present quite gen-



THE MAHONING COUNTY MEDICAL SOCIETY BULLETIN

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THE MEDICAL PROFESSION AND THE NRA.

The Medical Profession responds whole-heartedly to the President's appeal for co-operation in the task of economic rehabilitation. No informed person could expect anything else. To all but the stupid, the motivating spirit of the Profession — the spirit of Service—is too well known to be for one moment challenged.

The Medical Profession wants the NRA to succeed. To that end its members are willing to continue to make sacrifices not required by law, nor even dictated by conscience or a sense of obligation.

The Profession, with perfect propriety, however, may do a little thinking as to the effect some of the incidental elements will have upon its own fortunes. In the first place, the "Blue Eagle" in the doctor's window means, or it should mean, that if the salaries he previously paid to his assistants were less than the specified minimum, he must increase his overhead by that item. Then, if the "Buy now!", "Spend, don't save", and other similar slogans are acted upon literally, old accounts will remain unpaid, and, furthermore, new accounts will have to join their elder sisters, and, like the ancient spinsters the latter have become, will waste themselves into non-existence, just waiting! Hand in hand with these things, we are confronted with ever-increasing, almost sky-rocketing, prices for everything that enters into one's professional and personal requirements.

Still, there is that other ever-present grievance, and that is the burden of charity work. Nobody wants people to suffer pain and distress simply because they happen to be without means to pay for relief. But any individual who has the money to buy movie tickets, to own and operate an automobile for pleasure, "throw" parties, get numerous "permanents", attend wrestling matches at a dollar each, keep a cradle phone and one or more extensions about the residence just for convenience, has real estate, who owns stocks and bonds,—such people can pay! The doctor who dallies along with folks of this kind is forgetting the dignity of his calling, is winning the secret contempt that people accord to those who are "easy", is cheating the profession and is deceiving himself.

Health is an essential,—not a luxury,—although one who loses it remembers regretfully how *luxurious* it was to have it. If health is really a necessity, then the cost of keeping it or regaining it, is a necessary expense, and should be provided for, along with essentials such as clothing, food, and shelter. It should constitute a part of the payments made out of the very first pay-checks, and all other pay-checks, received as a result of the "NEW DEAL".

To be consistent with the NRA movement, we must also increase our own purchasing power. If we neglect that, we simply are not co-operating. If we go on doing the bulk of our work free of charge; if

we keep on reducing fees; if we neglect to see that our collections are at least reasonably what we have the right to expect, we thereby limit our purchasing power, and of course are to that extent acting in a way fundamentally opposed to the prime purposes of the movement.

Like an alarm clock, ballyhoo has

its place, to awaken us. But, once awake, just as we shut off the alarm clock, so should we cut out the ballyhoo. We should then proceed to dress, get set to go, and let the quieter and usually more reliable agencies of common sense, direct us in the light of realities and the common welfare.

C. B. N.



ANTERIOR POLIOMYELITIS

A local newspaper recently carried an editorial in which the Medical Society was urged to make a survey of the flurry of poliomyelitis which has occurred here. The editorial writer, who seems to have a very good grasp of the subject, somewhat naively prods us into an investigation as to the mode of transmission and a possible common source of infection. To him it appears that this is a fine opportunity for us to make an important contribution to the knowledge of Polio-myelitis.

We regret to disillusion the well meaning writer, but, as he probably knows, there are very few acute infectious diseases which have received more attention of the medical profession and of organized medical research than "polio". There were a good many opportunities for epidemiologists to make complete surveys of large series of cases—of thousands in some instances—without arriving at any definite conclusions about the etiology and mode of transmission.

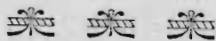
The problem is still receiving a great deal of attention and we are learning something all the time. For instance, the treatment with convalescent serum, and spinal drainage has greatly reduced the mortality and the amount of residual paralysis. We are confident that the organism

responsible for the disease and the mode of transmission will be found sooner or later. In the meantime it may be just as well to treat our patients in the best known manner and not allow ourselves to be carried away by futile enthusiasms.

We might mention also that the city health commissioner and the county health officer are the constituted authorities to handle problems of this sort, and that it is their job. Whenever they feel that the problem is beyond their control they can call for help from the state or national public health services. The sincerity of the city administration might also be questioned in this connection: It is willing to pass the buck to the medical society, but knowing that a survey of this nature would require a good deal of work and much laboratory investigation, we might ask the pertinent question, why an appropriation was not made to carry it out?

We want to commend the writer of the editorial on his very wise concluding paragraph in which he calls attention to the diseases such as small pox and diphtheria for which we have found prophylactic measures and for which he urges immunization.

C. S



NOTICE

The secretary is compiling a list of people who have recovered from anterior poliomyelitis for the purpose of making convalescent serum avail-

able as the need arises. All physicians who have had cases under their care will kindly report the names and addresses to Dr. Skipp.

SEPTEMBER MEETING

Mahoning County Medical Society
Tuesday, September 19th, 8:15 P. M.
YOUNGSTOWN CLUB

SPEAKER:

DR. GEORGE M. CURTIS
Professor of Surgery, Ohio State University,
Columbus, Ohio.

SUBJECT:

"The Significance of the Iodine Content of
Human Blood".

Annual Picnic and Clambake
of the
Mahoning County Medical Society

Thursday, Sept. 28th

Squaw Creek Country Club

Total Expense \$1.50
Golf 50 Cents Extra

**International Assembly
of the
Inter-State Post Graduate Medical Association
of North America**

Oct. 16 to 20, Inclusive

**Public Auditorium
Cleveland, Ohio**

Registration Fee, \$5.00

HAEMATOLOGY COURSE

In Eight Lectures and Demonstrations

DRS. DOAN AND WISEMAN

of the

Ohio State University Medical School Faculty

Registration Fee for Entire Course \$3.00

ENROLL NOW

Outline of Course on Page 18

MEETING PLACE TO BE ANNOUNCED

CLEVELAND ACADEMY OF MEDICINE

Medical Library Auditorium

Friday, Sept. 15, 8:15 P. M.

DR. FRANK LAHEY, Boston

Subject

PROBLEMS IN GASTRO-INTESTINAL SURGERY

Tentative Outline for Course of Lectures on Haematology

Friday, Oct. 20th

1. (Dr. Doan)

- a. The origin and relationship of the cells of the blood and connective tissues.
- b. The reflection in the blood of tissue and organ reactions. A survey of the newer methods of study—an evaluation of technics—with a discussion of the basis for clinical interpretations.

Thursday, Oct. 26th

2. (Dr. Wiseman)

- a. The lymphocyte and the lymphatic system (lymph nodes, spleen and thymus). Is the lymphocyte simply a stem cell for the derivation of other more highly differentiated cells or has it an independent life cycle and specific functions to serve?

- b. The lymphadenopathies: Infectious, tuberculous, lymphosarcoma, leucosarcoma, Hodgkin's disease, metastatic malignancy, lymphatic leukemia, etc.

Friday, Nov. 3rd

3. (Dr. Doan)

- a. The life history and function of the three types of granulocytes.

- b. The clinical leucopenias and leucocytoses, differential diagnosis and treatment (pyogenic reactions, myeloid leukemia, agranulocytic angina.

Friday, Nov. 10th

4. (Dr. Wiseman)

- a. The physiological pathology of the blood platelet and capillary endothelium. The mechanism and significance of blood clotting.

- b. The purpuras and hemorrhagic disease; Their differential diagnosis and treatment.

Friday, Nov. 17th

5. (Dr. Doan)

- a. The so-called reticulo-endothelial system. The monocyte-clasmatocyte question and its significance in the understanding of the cellular defenses of the body.

- b. The monocyte and the importance of the blood picture in tuberculosis; chemical and cytological contributions to a better understanding and control of tuberculosis infections.

Friday, Nov. 24th

6. (Dr. Doan)

- a. Erythropoiesis and its fundamental importance to all normal organic functioning. Fundamental hereditary considerations.

- b. The anemias:

1. Familial dyscrasias (congenital hemolytic icterus, sickle cell anemia, polycythemia vera, etc.)
2. Nutritional deficiency states.
3. Hemorrhage, acute and chronic.

The anemias continued.

4. Childhood dyscrasias; the difference in interpretation of data from infants and children versus adults.

5. Pernicious anemia; etiology, diagnosis and treatment.

Friday, Dec. 1st

7. (Dr. Wiseman)

Demonstration of modern hematologic technics—including the supravital study of living cells.

Friday, Dec. 8th

8. (Drs. Doan and Wiseman)



MEDICINE IN PANAMA

By Dr. F. F. Monroe*

Historians tell us that during the sixteenth and seventeenth centuries the Isthmus of Panama, at that time known as the Isthmus of Darien, enjoyed one of the largest export trades in the then civilized world; that the value of bullion shipped from the Northern port of the Isthmus is equivalent today to two hundred million dollars per year, and it was here that merchants from Europe, Cuba, and Santo Domingo brought their goods to Nombre de Dios, Panama, then the terminal of the Royal paved road across the Isthmus. The Spanish treasure fleet, laden with gold, silver and precious stones taken from the Incas by Pizarro and his followers, in their conquest of Peru, made Panama its base. The merchants of Peru and all the Western coasts of South America, the Western coast of Mexico, and the Philippine Islands gathered here for the purpose of purchasing from, and exchanging with, their confreres from the East. This market place attracted adventurers of all kinds, most outstanding being the two English buccaneers of the day, Sir Francis Drake and Sir Henry Morgan, who seized many of the Spanish cargoes of rich ore, burned their towns and carried away many prisoners; the latter, Morgan, sacked and burned the old city of Panama in 1671. The towers of the old cathedral, the old arched bridge and some remains of public buildings are still standing, being located about five miles from the present city of Panama. To cross the Isthmus, by the Chagres River and the jungle, it took him and his 1200 men ten days, and these men apparently had more fear of the diseases of the climate than of the weapons of the enemy.

Even in that day there were some dreams of an artificial waterway from the Atlantic to the Pacific. The Spanish were the first to direct a survey; the interest lapsed from century to century, until the ill fated attempt of the French, under the

leadership of Ferdinand de Lesseps, the builder of the Suez Canal. The frightful death rate from yellow fever, malaria and other diseases caused the French Canal Company, after nine years of activity (1881-1890), to give up the project. During these nine years, although the French carefully concealed all documentary evidence, it is believed that from one-third to one-half of their white men died of yellow fever alone, and the malarial death rate will never be known. Lack of knowledge of the role which the mosquito plays in the transmitting of yellow fever and malaria, and limited knowledge of the dissemination of intestinal diseases typhoid, dysentery and hook worm infections, were the chief causes of the French failure.

Following the Spanish-American war, with American experience in Cuba, Porto Rico and the Philippines, a great deal was learned concerning these diseases, particularly the mosquito borne infections. The dramatic story of the discovery, in 1900, in Cuba, of the etiology and mode of transmission of yellow fever by Walter Reed and his associates is well known. No one was more interested in this work than Dr. W. C. Gorgas, then chief sanitary officer of Havana. He at once proceeded to apply these discoveries—hot off the griddle—with such energy and ingenuity, and with such telling effects, that in a short time Havana, which for years had had a terrific death rate from this disease, was rid of it. This was an epoch making work of practical sanitation, and when the United States was ready to begin construction of the Panama Canal, Surgeon-General Sternberg, recognizing Dr. Gorgas' special fitness for the job of cleaning up the disease infested Isthmus, selected him to head the Sanitary Department of the Panama Commission.

The epic of the construction of the Canal has been told many times. The

* Dr. Monroe spent ten years, 1909 to 1919, as assistant chief of the medical service at the Ancon Hospital, Panama, working under the Canal Sanitary Commission.



world has never seen a greater demonstration of what American engineering skill and American energy can accomplish. The engineering problems of Chagres River and Culebra Hill were formidable, but the greatest barrier of all was the mosquito, and the Canal could never have been constructed without the aid of medical science. The disastrous attempt of the French had cost about twenty thousand lives, and the appalling mortality during the construction of the Panama railroad and the gold rush days made it evident that, in order to succeed in the Canal project, the sanitary problems had to be solved first.

The Isthmus of Panama was one of the worst pest holes in the world. The whole forty-mile stretch was one sweltering miasma of death and disease. The physical conditions found along the route of the proposed canal were favorable for the propagation of the mosquito and the development of yellow fever and malaria. The mean monthly temperature ranges from a minimum of 79 degrees in November, to a maximum of 81 in April, the lowest recorded being from 59 to 60 degrees. The rainy season comprises eight months of the year, and evaporation being slow in the wet season because of the extreme humidity, the *Stegomyia* and the *Anopheles* found ideal natural environment on the Isthmus most of the year. "In all the world", wrote J. A. Froude in 1885, "there is not perhaps now concentrated in any single spot so much foul disease, such a hideous dung heap of physical and moral abomination. The Isthmus is a dense tropical jungle, intensely hot, swarming with mosquitoes, snakes, alligators, scorpions, and centipedes; the home, even as nature has made it, of yellow fever, malaria and dysentery." The Isthmus had acquired a reputation in all quarters of the earth as the worst breeding place of all kinds of tropical disease, and as a stalking ground of death.

Such was the record of Panama when Dr. Gorgas and his little group of sanitarians debarked there in June 1904. In the biography of her husband Mrs. Gorgas tells that there was little interest in this group and that no one took them seriously. Des-

pite the recent discovery of the etiology and mode of transmission of yellow fever by Walter Reed, and the conclusive demonstration by Dr. Gorgas of effective control of this disease in Cuba, no one was giving them the slightest assistance or encouragement. There were still many disbelievers in the mosquito theory, not only in official circles but even among the doctors. His suggestions and plans aroused no response from the heads of the Canal Commission. He was not even able to obtain the most necessary supplies, and repeated request for men were ignored. The situation became so desperate that in the autumn he was forced to go to Washington to arouse interest in higher quarters. He was discouraged to a point of throwing up the whole job, and friends advised him to do so. But with his characteristic persistence he returned, in a few weeks, to Panama. It took an epidemic of yellow fever of no small proportions, before the importance of the sanitary corps was recognized and some necessary appropriations were made.

"The American Government", writes Mrs. Gorgas, "had plunged into the task with the same jauntiness and ignorant cheerfulness that had marked its French predecessors. It had failed just as completely as the French to recognize that disease was the most formidable obstacle in its path. A more shocking instance of the inability to profit from the mistakes of others is hardly recorded in history."

The story of the intrigues and the obstructive methods of swivel chair bureaucrats is too long to be recounted here. Even after yellow fever, the scourge which had afflicted Panama for centuries, was wiped out—one of the greatest triumphs in the history of preventive medicine—Gorgas was not free from official obstruction. The Canal Commission indulged in peanut politics, entirely ignoring the mosquito theory. At one time Gorgas came very near being supplanted, by an osteopath! And Mr. Taft, then secretary of war, approved of this change. There is little doubt that he would have been replaced, but for the intervention of The American Medical Association, through the person of Dr. Chas. A. L. Reed, of Cincinnati, who was com-

missioned to go to Panama and investigate conditions on the quiet, and make a report. Dr. Reed, an eminent physician and a past president of the A. M. A., working under the guise of a land agent, was so outraged by the ignorance and prejudice of the Canal Commission, that upon his return, he wrote and published in the public press a graphic account and scathing denunciation of the meddling interference by the officials with the sanitary work, of the red tape which surrounded them, and the persistence of its members in ignoring the mosquito theory. What was even more effective was his ridicule of the commission, which was so devastating that President Roosevelt at once removed all the heads of the Canal Commission.

It was several years before the work of Gorgas was officially recognized. Other attempts to replace him were made and it took the combined persuasion of medical leaders like Dr. Wm. H. Welch of Baltimore, Dr. Alexander Lambert of New York and others to convince President Roose-

velt that Dr. Gorgas was the best qualified man for his job and that the Sanitary Commission should be given more independence. Mr. Roosevelt finally made Dr. Gorgas a member of the new Canal Commission and the Sanitary Department enjoyed a freer reign after this.

Even now his department was not entirely free from annoyance. When Col. Goethals, in 1908, took charge of the canal construction, Dr. Gorgas had stamped out yellow fever in Panama and the world had already hailed him as a great benefactor of humanity. Yet Col. Goethals regard-

ed the appropriations for the Sanitary Department as wild extravagance and took every opportunity to criticize and belittle its work. But Dr. Gorgas was not a man to allow personal feelings to interfere with his duty, and he and his department went on with their tasks to clean up the Canal Zone.

The role which Dr. Gorgas played in the Canal construction is so remarkable and his work was so great that no one can write or speak of the history of the project without assigning him an important place. The name Gorgas and the Panama Canal have become almost a synonym so that the writer was forced to give him and his trials and tribulations some space before proceeding with a record of his own experiences and observations in Panama.

YELLOW FEVER

It was not my privilege to be in Panama during the days of yellow fever extermination. The elimination of this disease was easier than that of malaria and some of the other diseases.

The *Stegomyia Fasciata*, a short flying domestic species, develops almost entirely in artificial water containers in houses and yards. As the first step, an adequate water supply was installed in Colon and Panama, the terminal cities. Wells, cisterns and tanks were prohibited; roof gutterings, vases, plant pots, ant guards, empty cans and bottles, ditches, and holy water fonts were also prohibited to prevent the breeding of the larvae. The yellow fever patient, being infective only during the first three days of the disease, was placed beyond the reach of mosquitoes by double screen-



William Crawford Gorgas, M. D.
1854-1920



ing. The native was immune. Infected mosquitoes in a house, where a recent case had occurred, generally remained localized, and could be killed by fumigation. By taking advantage of these methods, Dr. Gorgas was able to eliminate yellow fever in a surprisingly short time. The last case occurred two years after he started yellow fever control. Cases were brought into the Zone afterwards from passing ships, the last being, to my best knowledge, in 1919, but there was no spread of the disease. A very strict quarantine of all the ships was maintained.

The initial stage of yellow fever is characterized by a sudden onset, with chills, severe frontal headache, and muscular pains. At first the temperature is moderate, increasing in 24 hours to 104. There is nausea and thirst; the conjunctiva is injected and the face is flushed. In the majority of cases the temperature drops after 24 hours, ushering in the so-called period of remission. In many of the milder cases this may be the beginning of convalescence. But in the majority of cases the period of remission may last only a few hours and then the disease enters the second stage. The temperature again rises to about 104 degrees, the nausea and vomiting are increased, and the urinary findings, which may be only slight at first, are now more marked, with albumen and casts found in large quantities, together with a diminution in the quantity of urine. The conjunctivae, until now injected, are more or less jaundiced. By the fourth day the typical picture of yellow fever is complete. The black vomit, the bleeding gums, jaundice of the entire body, and the scanty urine make the diagnosis obvious. Death rarely occurs before the sixth or seventh day from the time of onset.

Favorable prognosis is first indicated by increase in the amount of urine excreted, and a decrease in the amount of albumen, casts and bile pigments. The convalescence is rather rapid, even severe cases recovering in about thirty days. The death rate is 60% or more in many epidemics. The chief pathological lesions are found in the liver, kidneys and heart muscle.

MALARIA

The elimination of malaria was a much more difficult task on account of the long flight of the malarial mosquito, *Anopheles*. It required a prolonged systematic fight against this species of mosquito before results were obtained, results none the less spectacular, considering that the malarial morbidity rate among Canal employees was reduced from 821 per thousand in 1906, to 11 per thousand in 1927, and the mortality rate from 7.45 to zero per thousand in the same period.

The attack on malaria was simultaneously made from several points: Against the known cases in man and for prophylaxis, quinine was used extensively, and screening of known cases of malaria to prevent their being bitten by the *Anopheles*. There was a campaign for systematic killing of the adult mosquitoes and the larvae and pupae by oiling breeding places, cutting grass, filling, draining fresh water or replacing it by sea water. It was no easy task, and the Sanitary Department had to use a great deal of ingenuity and perseverance to accomplish this.

When considering malaria it is necessary to bear in mind that there are three species of the malarial parasite, Tertian, Quartan and Aestivo-Autumnal, each causing a distinct clinical disease. The Tertian is caused by the *Plasmodium Vivax*, the Quartan by *Plasmodium Malariae* and the Aestivo-Autumnal by *Plasmodium Falciparum*. The mosquito which is the chief carrier of malaria in America is the *Anopheles Quadrimaculatus*.

The symptoms of malaria vary greatly but fall chiefly into two groups: those with regularly intermittent, and those with remittent and continuous fever. The Tertian and the Quartan have the intermittent, and the Aestivo-Autumnal the remittent or continuous fever. There are recurrent paroxysms, in which, as a rule, chills, fever and profuse sweating follow each other in orderly sequence. This is true of the Tertian and Quartan fever.

The period of incubation varies, experimentally, from 36 hours to 15 days. The three stages of the paroxysm consume about twelve hours. The Tertian frequently produces the

highest temperatures and, in single Tertian infections, the paroxysm occurs every 48 hours. If the infection is double, every 24 hours. There are marked gastric symptoms, backache and malaise, and there is usually considerable enlargement of the spleen, during paroxysms. In the case of Quartan fever, the paroxysm corresponds to the parasitic cycle, which requires seventy-two hours to develop. If the infection is single, the chills will occur every fourth day; if double, there are two daily paroxysms followed by a day of intermission; if triple, the fever is quotidian or daily. The Quartan symptoms are milder than the Tertian, but the Quartan is more prone to relapses, hence is apt to become chronic and produce the largest spleens and a greater number of chronic nephritics.

The remittent type, the Aestivo-Autumnal, has a life cycle of 48 hours, but is subject to considerable variations and thus produces irregular symptoms, the febrile course lasting, according to the severity of the infection, from four to eight days. This may be moderately mild, as seen in the southern part of the United States, or of a more severe type. There is a pernicious type (sometimes called Chagres Fever), probably a subdivision of the Aestivo-Autumnal, which causes a terrific degree of R. B. C. infection. Many times there may be found in a single R. B. C. from two to eight malarial parasites. In this variety the liver, spleen, bone marrow, brain and other vital organs, where there is a sluggish circulation, this being particularly true of the brain, are the favorite sites for the localization of the malarial parasite.

The pernicious Aestivo-Autumnal type may also be classed into three sub-heads: the comatose, the algid, and the hemorrhagic.

In the tropics, especially where the patients cannot be quickly brought under hospital observation and treatment, it is not uncommon to have patients arrive in a comatose state, this being due to the blocking of cerebral capillaries by parasitic thrombi. This may be rapidly fatal if heroic treatment is not instituted at once. More than fifty per cent of malarial deaths are due to

the comatose type. The prognosis is doubtful until the patient is out of coma and is well cinchonized.

The algid type is much less common. With this type there is pronounced gastro-intestinal involvement, due to capillary blocking of intestinal vessels. There are subnormal temperature and marked prostration, in this type, often leading to rapid fatal termination.

The hemorrhagic or hemoglobinuric fever, the so called black water fever: in this there is a rapid hemolysis of the red blood cells, frequent suppression of urine, or, when there is some excretion, the urine it is highly albuminous, with haemic crystals, very diagnostic features. There is a very rapid diminution of haemoglobin and R. B. C.s, frequently dropping to ten per cent—a very tragic picture and one which requires rapid and vigorous treatment. Although quinine may precipitate black-water fever it is nevertheless generally used, in the presence of a heavy parasitic infection. This is augmented by hot packs to the kidneys, by supportive measures for circulatory failure such as saline infusions and blood transfusions, by nutritious foods and general tonic treatment.

Treatment of Malaria in General

The average Tertian and Quartan malaria cases require ten grains of Quinine Sulphate three times a day. The Aestivo-Autumnal, if seen early in the milder form, about the same dose, but if severe or of the pernicious type, forty to eighty grains daily is very frequently used. In the very toxic or severe type, quinine cannot be retained by the stomach and must be administered intravenously, in doses from seven and one half to ten grains in ten to fifteen C. C. of saline solution. In the early days on the Zone, intramuscular injection of quinine was used in 22½ grain doses, but this was a very painful method and abscesses frequently occurred. As soon as the parasites in the blood and ferbile symptoms cleared up, thirty grains were given daily, reducing in time to twenty grains. Nutritious food and tonic treatment are important

Blackwater fever, in chronic recurring cases, and toxic ambyopia may occur from a too rapid cinchonization of the patient. The tendency today is to use smaller doses of quinine, but it is probable that they have a milder form, or that the patient is under observation and has treatment earlier than in the busy days of Canal construction.

Quinine Sulphate in a liquid form is preferred to the tablet or capsule. More recently a synthetic quinoline known as "plasmochin" has been used. There are many claims for it, especially on the destruction of the malarial crescent and the gametocytes, but the proof is not conclusive.

(To be continued)



MEDICAL CLEANINGS

Dr. H. E. Welch is confined to his home at 261 Spring St. He will welcome any of us.

Dr. A. E. Brant is back to work. Good to see you back Earl!

Dr. Harold Beard is back to work after a brief hospital confinement. We are told he has the "Gout". How about it Harold?

Dr. H. Lynn Beers is at home after a stormy time in a hospital in the South.

Dr. Vern Neel is at 315 E. Speedway, Tucson, Ariz. Latest reports are that he is not doing so well. Send him a card, he will like to hear from us all.

Dr. M. S. Rosenblum has opened an office in the Home Savings & Loan Bldg.

Dr. James Brown toured through the middle West seeing football and baseball games and the World's Fair.

Dr. J. P. Harvey visited the World's Fair.

Dr. J. B. Nelson just returned from an extensive visit through New

England. Jim got pinched while in New York state because he did not read speed signs in the smaller towns, but he is a good talker and got away without a fine or jail sentence.

Dr. P. J. Fuzy left the advertising office for a few days while he was in Buffalo, N. Y., visiting old friends at the Buffalo General Hospital.

Dr. W. H. Bennett, one of the few choice bachelors of our profession, has decided to leave the ranks of the few and has joined up with the most popular class as a married man. Good luck Wendell.

Dr. R. G. Mossman has returned to his practice after a very successful fishing trip to Canada. He caught some big ones he says. How about it Bob?

Dr. R. M. Morrison is visiting friends on the shores of Lake Erie.

Dr. John Lindsay and family have just returned from a motor trip through Pennsylvania.

Dr. and Mrs. W. O. Mermis announce the arrival of a baby boy on July 2nd.



A REMINDER

The editor wishes to remind the contributors who have articles in preparation to speed them along. His task will be greatly lightened if manuscripts are carefully edited and

typewritten, in double spacing before handing them in.

Do not forget our hard working business manager. Get him some advertising prospects and favor our advertisers wherever you can.

REPORT OF COMMUNICABLE DISEASES, AUG., 1933

	Youngstown	County	Campbell	Struthers	Muni. Hosp.
Whooping Cough	57	8		1	
Measles	2				
Infantile Paralysis	13	5			
Epidemic Meningitis	1				
Scarlet Fever	13	3		2	1
Chicken Pox	1				
Typhoid Fever	20				
German Measles	1				
Tuberculosis	22	7	1		
Ophthalmia Neonatorum	2				
Gonorrhoea	6			1	
Syphilis	1		2		5
Small Pox		2			
Pneumonia	1	2			
Diphtheria		1			
Mumps		6			

FROM THE CITY HEALTH COMMISSIONER

The total number of cases of communicable diseases reported to the City Health Department and in the Municipal Hospital shows a slight increase for the month of August.

The total cases for July was 140 and for August 149. The three diseases showing a very decided increase are Infantile Paralysis, Typhoid Fever and Tuberculosis.

The number of cases of Infantile Paralysis, while not yet alarming, has reached a point where serious consideration should be given to it and very close observation given to any children who show doubtful or questionable symptoms. In any case of doubt a report should be sent in to the Health Department and a Contagious Disease card placed on the house until such time as definite diagnosis can be made. This will help greatly in preventing the spread of any communicable disease.

The Typhoid fever cases are many more than is desirable. However, it is believed that this is largely due to summer vacationing and importing of the disease. No definite source has been found in the City. Early reporting of suspicious cases will greatly assist the department in making their check up and will tend to prevent its spread.

Most people fail to realize the full importance and value of properly filled out birth certificates. This failure applies not alone to the general public but extends to health workers and physicians.

From the community standpoint, public health efforts toward the reduction of deaths in infancy and in child-birth are dependent on birth registration, because infant mortality and maternal mortality are measured in terms of the number of births

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recorded. To the individual, a birth record, properly filled out and recorded, is of vital importance, since it serves to establish his citizenship and parentage and proves his age.

The laws of Ohio provide that within ten days after a birth occurs, the record must be reported to the local registrar by the physician in attendance. Will the infant and maternal death rate of Youngstown be a true picture at the close of 1933, or will it be made false by the failure of physicians to report births, and will parents and children be disappointed when the children reach school age and learn that no certificate of birth has been recorded?

In this connection, due to the city's industrial growth, some mention should be made and suggestions offered which will assist the physician in the proper recording of data on birth and death certificates.

The question of occupation is often passed over as being very unimportant. However, in order to obtain statistical information, it is of great importance. Two questions must be answered concerning occupation, on each birth and death certificate. First, what did he do? On a birth certificate, this applies to the father; on the death certificate this applies to the deceased. Second, in what industry or business did he work? In answering the second question names of firms should not be used, but the

industry or business should be given. Firm names, indicate locally the industry or business, but are of no value to the state statistician.

Care should be taken in making the return for the person who is retired or unemployed, to give the occupation he followed and the date he last worked. If a person has (or had) two occupations, only the more important should be given. Women, doing housework in their own homes should be returned as housewife, own home; but doing work for wages, should be returned as housekeeper, servant or cook in private family or hotel.

The following information should be used as a guide in making accurate and simple returns, as agent, real estate; carpenter, car factory; cashier, department store; farm laborer, working out; labor, coal mine; laborer, steel mill; salesman, automobile.

The complexity of classification will be understood when one considers that there are 217 main occupations and occupational groups, 96 of which are subdivided, making a total of 557 separate occupations. Accuracy of data collected depends upon the effort of the person making the original report. The assistance and cooperation of the medical profession is earnestly solicited.

C. H. BEIGHT, M. D.

Acute Anterior Polio-Myelitis

(Continued from page 13)

erally in Italy, with the hope of inhibiting the activity of the inflammatory foci in the nervous system. This treatment also shows no value as yet. Diathermy has been advocated, but with no proven value. The Drinker apparatus for continuous and prolonged artificial respiration, has proven fairly successful in those cases in which the paralysis affects the muscles of respiration and is of temporary duration.

Among the drugs, urotropin, salicylates, barbitol derivatives, opiates, etc., can be used as the symptoms indicate. Rest in bed should certainly be advised for at least three weeks, and normal activity should be gradually resumed, but care is to be taken to avoid fatigue. The prophylactic treatment at present cannot be prov-

en to be of any benefit.

Since the incidence of the disease is quite high and the value of the serum questionable, with a large percentage of the population actively immunized, it would be impossible to make any deductions as to the virtue of any preventive method. Isolation of those afflicted, careful observation of contacts, and avoidance of crowded places, during the months of greatest incidence, is the extent of our knowledge of the subject of prevention.

Being most anxious to stimulate interest in the diagnosis of the mild and non-paralytic type, I have purposely avoided discussion of the very evident paralytic stage, which is largely an orthopedic problem.

E. R. Thomas, M. D.

Watch for the Details, in October Issue of

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